

Flow Measurement

SITRANS F O delta p - Primary differential pressure devices

Orifice plate with annular chamber

Selection and ordering data	Article No.	Order code	Selection and ordering data	Article No.	Order code
Orifice plate with annular chambers	7 ME 1 1 1 0 -	- 1	Orifice plate with annular chambers	7 ME 1 1 1 0 -	- 1
for mounting between flanges					
Sealing faces to the mating flanges: plane.					
<u>Nominal diameter acc. to EN</u>					
DN 50			DN 350		
PN 6		1 GA	PN 6		2 HA
PN 10 ... PN 40		1 GE	PN 10		2 HB
PN 63		1 GF	PN 16		2 HC
PN 100		1 GG	PN 25		2 HD
DN 65			PN 40		2 HE
PN 6		1 HA	PN 63		2 HF
PN 10 ... PN 40		1 HE	PN 100		2 HG
PN 63		1 HF	DN 400		
PN 100		1 HG	PN 6		2 JA
DN 80			PN 10		2 JB
PN 6		1 JA	PN 16		2 JC
PN 10 ... PN 40		1 JE	PN 25		2 JD
PN 63		1 JF	PN 40		2 JE
PN 100		1 JG	PN 63		2 JF
DN 100			DN 500		
PN 6		2 AA	PN 6		2 KA
PN 10 and PN 16		2 AC	PN 10		2 KB
PN 25 and PN 40		2 AE	PN 16		2 KC
PN 63		2 AF	PN 25		2 KD
PN 100		2 AG	PN 40		2 KE
DN 125			DN 600		
PN 6		2 BA	PN 6		3 AA
PN 10 and PN 16		2 BC	PN 10		3 AB
PN 25 and PN 40		2 BE	PN 16		3 AC
PN 63		2 BF	PN 25		3 AD
PN 100		2 BG	DN 700		
DN 150			PN 6		3 BA
PN 6		2 CA	PN 10		3 BB
PN 10 and PN 16		2 CC	PN 16		3 BC
PN 25 and PN 40		2 CE	PN 25		3 BD
PN 63		2 CF	DN 800		
PN 100		2 CG	PN 6		3 CA
DN 200			PN 10		3 CB
PN 6		2 EA	PN 16		3 CC
PN 10 and PN 16		2 EC	PN 25		3 CD
PN 25		2 ED	DN 900		
PN 40		2 EE	PN 6		3 DA
PN 63		2 EF	PN 10		3 DB
PN 100		2 EG	PN 16		3 DC
DN 250			PN 25		3 DD
PN 6		2 FA	DN 1000		
PN 10		2 FB	PN 6		3 EA
PN 16		2 FC	PN 10		3 EB
PN 25		2 FD	PN 16		3 EC
PN 40		2 FE	PN 25		3 ED
PN 63		2 FF	<u>Nomin. diameter acc. to ASME</u>		
PN 100		2 FG	2 inch		
DN 300			Class 150		5 GA
PN 6		2 GA	Class 300		5 GB
PN 10		2 GB	Class 600		5 GC
PN 16		2 GC	2½ inch		
PN 25		2 GD	Class 150		5 HA
PN 40		2 GE	Class 300		5 HB
PN 63		2 GF	Class 600		5 HC
PN 100		2 GG	3 inch		
			Class 150		5 JA
			Class 300		5 JB
			Class 600		5 JC
			4 inch		
			Class 150		6 AA
			Class 300		6 AB
			Class 600		6 AC

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5 inch			Tapping sockets		
Class 150	6 BA		with threaded connection G½; for liquids and gases PN 160, for steam PN 100		
Class 300	6 BB		• Opposite one another, straight		A
Class 600	6 BC		• Opposite one another, bent- up, for vertical pipelines		B
6 inch			• Arranged on one side, for horizontal pipelines		C
Class 150	6 CA		With threaded connection ½-14 NPT male		
Class 300	6 CB		• Opposite one another, straight		Q
Class 600	6 CC		• Opposite one another, bent- up, for vertical pipelines		R
8 inch			• Arranged on one side, for horizontal pipelines		S
Class 150	6 EA		With pipe Ø 12 mm for pipe union with ferrule, max. 200 °C permissible		
Class 300	6 EB		• Opposite one another, straight		J
Class 600	6 EC		• Opposite one another, bent- up, for vertical pipelines		K
10 inch			• Arranged on one side, for horizontal pipelines		L
Class 150	6 FA		With welding connection Ø 21.3 mm for liquids and gases PN 100 ... PN 400, for steam PN 100		
Class 300	6 FB		• Opposite one another, straight		D
Class 600	6 FC		• Opposite one another, bent- up, for vertical pipelines		E
12 inch			• Arranged on one side, for horizontal pipelines		F
Class 150	6 GA		Shape of orifice disk aper- ture		
Class 300	6 GB		For flow in one direction (see figure "Shapes of orifice disk aperture")		
Class 600	6 GC		• Orifice plate form A		A
14 inch			• Quarter-circle nozzle form B		B
Class 150	6 HA		For flow in both directions		
Class 300	6 HB		• Cylindrical orifice plate form D		D
Class 600	6 HC		Manufactured according to pressure equipment directive		
16 inch			None ¹⁾		0
Class 150	6 JA		According to Article 3, Para- graph 3		1
Class 300	6 JB		Design data Y31 to Y35 neces- sary		
Class 600	6 JC		According to category 1, 2, 3 with CE marking and EC decla- ration of conformity		5
20 inch			Design data Y31 to Y35 neces- sary		
Class 150	6 KA				
Class 300	6 KB				
Class 600	6 KC				
24 inch					
Class 150	7 AA				
Class 300	7 AB				
Class 600	7 AC				
Special version					
Specify Order code and plain text	9 AA 0 0	H 1 Y			
Nominal diameter: ..., nominal pressure: ..., material no.: ... and material name: ...					
Material for non-corrosive media					
Support rings made of P265GH, material no. 1.0425; tapping sockets made of P235GH, material no. 1.0345; orifice disk made of material no. 1.4404, permissible oper- ating temperature -10 to +400 °C	1 2				
Material for corrosive media					
Support rings, tapping sockets and orifice disk made of X 2 CrNiMo 17- 12-2, material No. 1.4404; per- missible operating temp. -10 to +400 °C	1 5				

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Further designs Add "-Z" to Article No. and specify Order code(s) and plain text.	
With Siemens calculation protocol Specify in plain text: No.: ... e. g. no.: 110025240101, Attach calculation protocol to the order	Y21
With third-party calculation Specify in plain text: No.: ... Attach calculation protocol to the order	Y22
Orifice plate without calculation Specify in plain text: Diameter of orifice disk aperture d = ... mm Internal diameter of pipe D=... mm Radius of quarter-circle nozzle r = ... mm	Y01
Design data according to Pressure equipment directive 97/23/EC	
Name of medium Specify in plain text: Medium: e. g. natural gas	Y31
Aggregate state Specify in plain text: Aggregate state: Liquid or gaseous	Y32
Fluid group Specify in plain text: Fluid group: Group 1: hazardous explosive fluid or Group 2: All other fluids	Y33
Max. permissible pressure Specify in plain text: PS = ... in bar or PSI	Y34
Max. permissible temperature Specify in plain text: TS = ... in °C or °F	Y35
Orifice plate degreased for oxygen measurements	
• DN 50 (2") ... DN 150 (6")	A12
• DN 200 (8") ... DN 400 (16")	A13
• DN 500 (20") ... DN 1000 (40")	A14
Material certificate Acceptance test certificate to EN 10204-3.1	C01
Cold water pressure test 1.5 x PN, with acceptance test certificate EN 10204	D11
Orifice disk including gasket	on request
Sealing face of orifice plate with recess or groove	on request

Note on ordering

The "calculation protocol" released by the customer with Order code Y21 or Y22 must be attached to the order as an appendix or the statement "orifice plate without calculation" will be made with Order code Y01.

Scope of delivery

Two support rings with tapping sockets, one orifice disk, one gasket between orifice disk and support ring.
Graphite (99.85%) flat gasket with foil insert (1.4401, 0.1 mm). Application for liquids, steam, gases, liquid gases, acids, hydrocarbons, oils and oil products.

Accessories

See "SITRANS P measuring instruments for pressure".